The Simple 7 Approach to Achieve Million Hearts Goals

Maryland Million Hearts Symposium
February 10, 2015

Eduardo Sanchez, MD,MPH,FAAFP

Chief Medical Officer for Prevention

American Heart Association

American **Heart** Association | American **Stroke** Association®

2013 Leading Causes of Death in the US

1. Heart disease
2. Cancer
3. Chronic lower respiratory diseases
4. Unintentional injuries
5. Stroke
6. Alzheimer's disease
7. Diabetes
8. Influenza, pneumonia
9. Kidney diseases
10. Suicide

NCHS Data Brief #178, 12/2014

Deaths Associated with Top Risk Factors (2010)

1. **Dietary risks**   **678,282**
2. **Smoking**   **465,651**
3. **High blood pressure**   **442,656**
4. **High body mass index**   **363,991**
5. **Physical inactivity**   **234,022**
6. **High blood sugar**   **213,669**
7. **High total cholesterol**   **158,431**
8. Ambient air pollution   103,027
9. Alcohol use   88,587
10. Drug use   25,430

Institute for Health Metrics and Evaluation (IHME),2013

Million Hearts®

Goal: Prevent 1 million heart attacks and strokes by 2017

- US Department of Health and Human Services initiative, co-led by:
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare & Medicaid Services (CMS)
- Partners across federal and state agencies and private organizations

Million Hearts® Intermediate Outcomes

- Reduced smoking prevalence

- Reduced sodium intake

- Reduced trans fat intake

- Improved aspirin use, when appropriate

- Improved blood pressure control

- Improved cholesterol management

Sixteen: Maryland's Overall 2014 Health Ranking

Strengths

- Low prevalence of smoking

- High immunization coverage among children

- Ready availability of primary care physicians

Challenges

- High violent crime rate

- High levels of air pollution

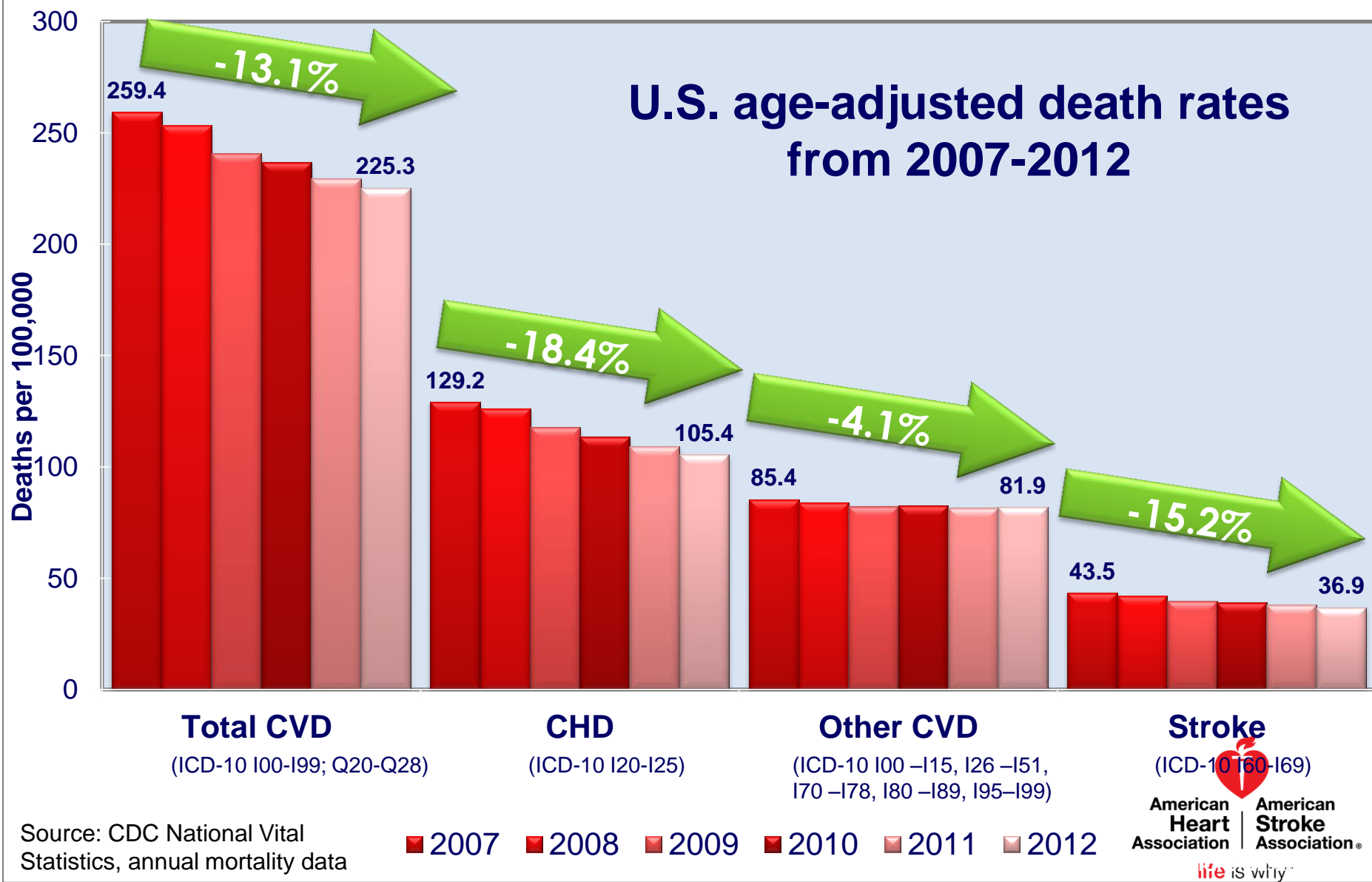- High prevalence of low birthweight

Source: America's Health Ranking 2014

2020 Impact Goal

20% 2020

"**By 2020, to improve the <u>cardiovascular health</u> of all Americans by 20%** while <u>reducing deaths</u> from cardiovascular diseases and stroke by 20%."

Progress to Date – Reducing Deaths

U.S. age-adjusted death rates from 2007-2012

Deaths per 100,000

- Total CVD: 259.4 → 225.3, **-13.1%**
- CHD: 129.2 → 105.4, **-18.4%**
- Other CVD: 85.4 → 81.9, **-4.1%**
- Stroke: 43.5 → 36.9, **-15.2%**

Total CVD
(ICD-10 I00-I99; Q20-Q28)

CHD
(ICD-10 I20-I25)

Other CVD
(ICD-10 I00 –I15, I26 –I51, I70 –I78, I80 –I89, I95–I99)

Stroke
(ICD-10 I60-I69)

Legend: 2007, 2008, 2009, 2010, 2011, 2012

Source: CDC National Vital Statistics, annual mortality data

American Heart Association | American Stroke Association®

life is why™

Heart Health

Action Strategies

- **Activate** stakeholders to advance the **health environment** of **communities** through alignment of **public policy** and **systems change** efforts.

- **Activate** individuals in the health of their **communities**, the **conversation** about health, and changing their own health.

GOAL

- Increase the percentage of all Americans who live in environments that support healthy eating, active lifestyles, smoke-free air, quality care and emergency response.

- Increase the percentage of all Americans who optimize their cardiovascular and brain health.

EMPHASIS

- Emphasize no smoking, healthy diet and physical activity in children and younger adults.

- Emphasize no smoking, control of blood pressure and cholesterol in adults.

- Optimize outcomes and quality of life for those with chronic disease.

- Optimize early detection, acute event treatment, post-event outcomes and quality of life.

The Platform for Heart Health: Life's Simple 7

- Smoking Status

- Physical Activity

- Healthy Diet

- Healthy Weight
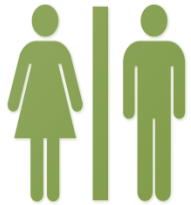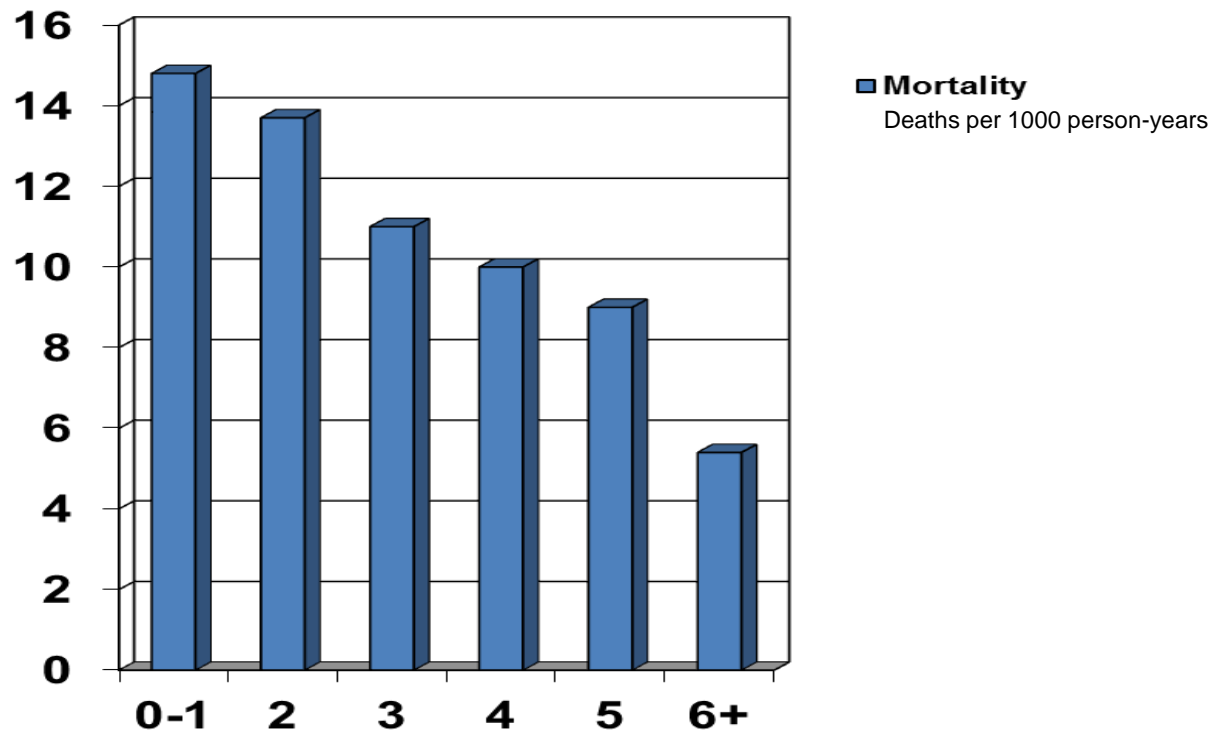
- Blood Pressure

- Cholesterol

- Blood Glucose

American Heart Association | American Stroke Association

Why
focus on Simple 7?

Why
focus on Simple 7?

Number of Ideal Heart Health Behaviors or Factors and Mortality

■ **Mortality**
Deaths per 1000 person-years

Yang, et al, JAMA, Vol 307, No.12, March 28, 2012

Creating a culture of
Health

American Heart Association | American Stroke Association

Why
focus on Simple 7?

Creating a culture of
Health

American
Heart
Association | American
Stroke
Association

Why
focus on Simple 7?

Deaths Associated with Top Risk Factors (2010)

1.	**Dietary risks**	**678,282**
2.	**Smoking**	**465,651**
3.	**High blood pressure**	**442,656**
4.	**High body mass index**	**363,991**
5.	**Physical inactivity**	**234,022**
6.	**High blood sugar**	**213,669**
7.	**High total cholesterol**	**158,431**
8.	Ambient air pollution	103,027
9.	Alcohol use	88,587
10.	Drug use	25,430

Yang, et al, JAMA, Vol 307, No.12, March 28, 2012

Creating a culture of
Health

American Heart Association | American Stroke Association

Cardiovascular Health Status Levels

LIFE'S SIMPLE 7	POOR	INTERMEDIATE	IDEAL
Smoking Status Adults >20 years of age Children (12–19)	Current Smoker Tried prior 30 days	Former ≤ 12 mos	Never /quit ≥ 12 mos
Physical Activity Adults > 20 years of age	None	1-149 min/wk mod or 1-74 min/wk vig or 1-149 min/wk mod + vig	150+ min/wk mod or 75+ min/wk vig or 150+ min/wk mod + vig
Children 12-19 years of age	None	>0 and <60 min of mod or vig every day	60+ min of mod or vig every day
Healthy Diet Adults >20 years of age Children 5-19 years of age	0-1 components 0-1 components	2-3 components 2-3 components	4-5 components 4-5 components
Healthy Weight Adults > 20 years of age Children 2-19 years of age	≥30 kg/m^2 >95th percentile	25-29.9 kg/m2 85th-95th percentile	<25 kg/m^2 <85th percentile
Blood Glucose Adults >20 years of age Children 12-19 years of age	126 mg/dL or more 126 mg/dL or more	100-125 mg/dL or treated to goal 100-125 mg/dL	Less than 100 mg/dL Less than 100 mg/dL
Cholesterol Adults >20 years of age Children 6-19 years of age	≥240 mg/dL ≥200 mg/dL	200-239 mg/dL or treated to goal 170-199 mg/dL	<170 mg/dL
Blood Pressure Adults >20 years of age	SBP ≥140 or DBP ≥90 mm Hg	SBP120-139 or DBP 80-89 mm Hg or treated to goal	<120/<80 mm Hg
Children 8-19 years of age	>95th percentile	90th-95th percentile or SBP ≥120 or DBP ≥80 mm Hg	<90th percentile

Prevalence of CV Health in U.S. Adults

% of Population - Adults age 20 and over

Legend: ■ Poor ■ Intermediate ■ Ideal

	Current Smoking	Body Mass Index	Physical Activity	Healthy Diet Score	Total Cholesterol	Blood Pressure	Fasting Plasma Glucose
Ideal	77.8	31.3	44.0	—	46.6	42.2	56.5
Intermediate	2.0	33.9	11.6	27.1	41.1	43.4	34.7
Poor	20.2	34.8	44.5	78.0	12.3	14.5	8.8
Year	2011-12	2011-12	2011-12	2011-12	2011-12	2011-12	2011-12
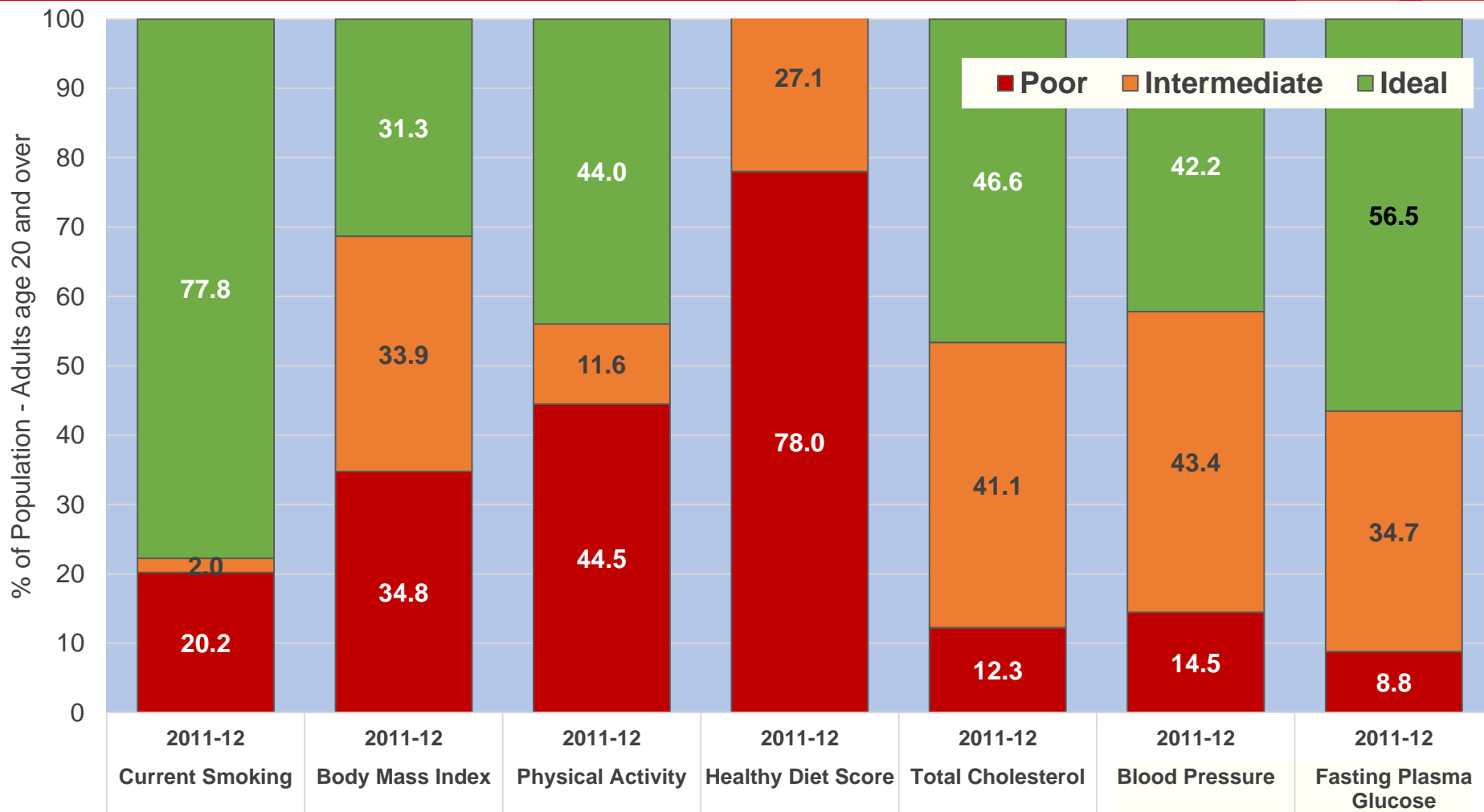
Average: ↑12%   ↓-2%   ↑9%   ↑1%   ↑6%   ↓-3%   ↓1%

Overall Improvement: 2.9%

County Health Rankings

Health Outcomes

- Length of life (50%)

- Quality of life (50%)

Health Factors

- Health behaviors (30%)

- Clinical Care (20%)

- Social and Economic Factors (40%)

- Physical environment (10%)

American Heart Association | **American Stroke Association**®

Building a Culture of Health in My Community

Tobacco
Increase percentage of Americans who live in environments that support smoke-free air and smoking cessation
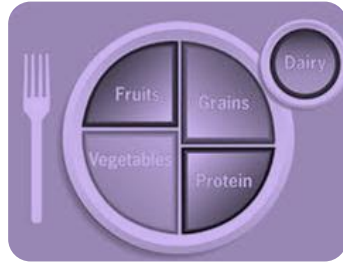
Nutrition
Improve environments that support healthy eating and improve quality of foods available

Physical Activity
Increase percentage of Americans who live in environments that support active lifestyles

Health Factors
Improve environments that support healthy weight, blood pressure, glucose and cholesterol

CPR/Chain of Survival
Increase percentage of Americans who live in environments that support emergency response for cardiac arrest

Acute Care & Emergency Response
Increase percentage of Americans who live in environments that support decreased cardiovascular disease mortality and improved quality of life

Post-Event Care
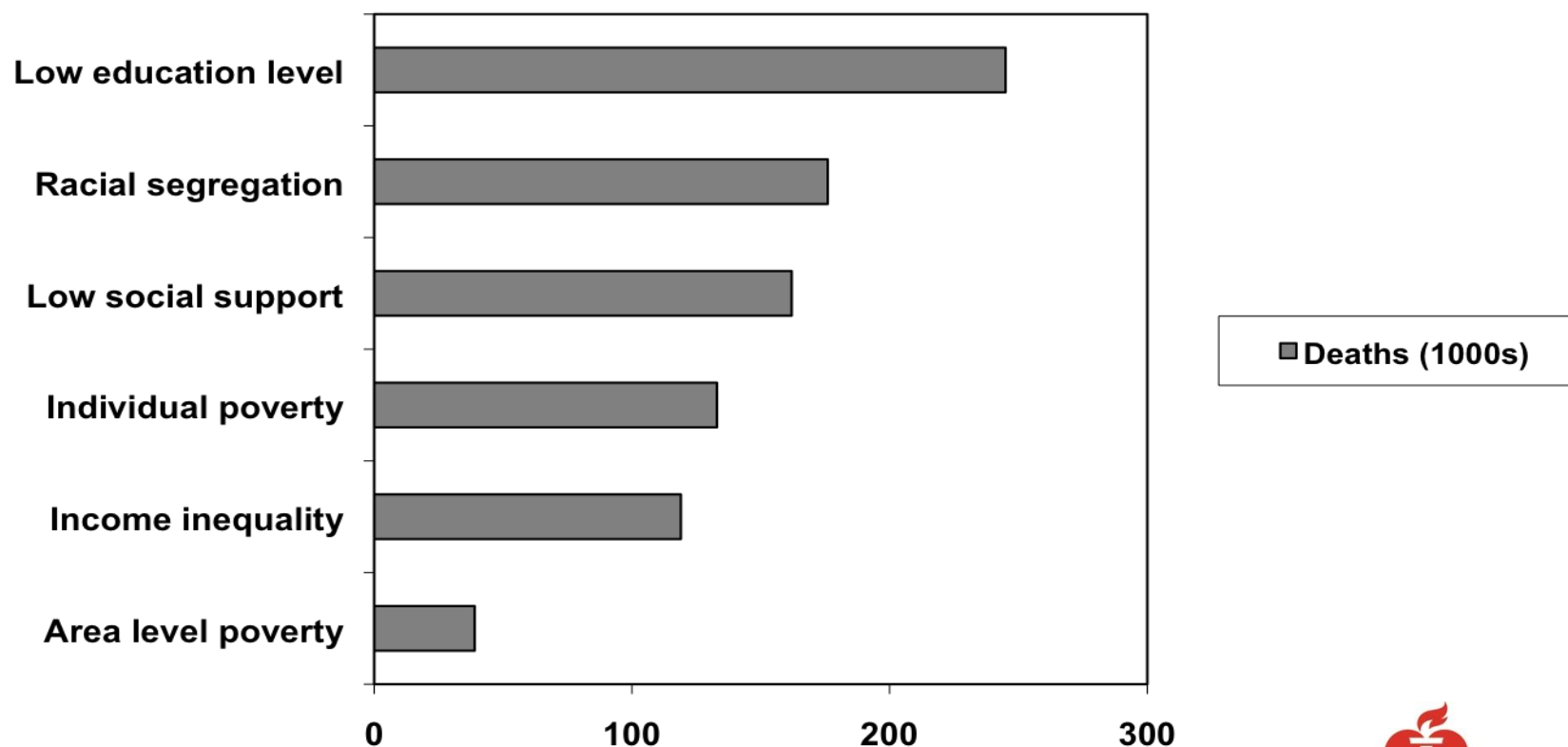*Increase percentage of Americans who receive the support and education needed after acute events*

Social Determinants
Ensure safe places to work, play, and get care are available for all Americans

Relationship Between Social Determinants and Mortality (2000)

Galea et al, Estimated Deaths Attributable to Social Factors in the United States, AJPH, August 2011, Vol 101, No. 8.

Educational Attainment Linked to Decline in Mortality

Education level (25 to 64 YO)	Mortality Rate (deaths per 100,00)
Less than high school education	650.4
Only a high school education	477.6
Some education beyond high school	206.3

NCHS, 2007

Place Matters

Neighborhood Affects on the Long-Term Well-Being of Low-Income Adults

- Moving from a high-poverty to lower-poverty neighborhood leads to long-term (10- to 15-year) improvements in adult physical and mental health and subjective well-being, despite not affecting economic self-sufficiency.
  - Lower levels of obesity, diabetes, and depression

- A decline in neighborhood poverty (13% points) increases subjective well-being by an amount equal to the gap in subjective well-being between people whose annual incomes differ by $13,000—a large amount given that the average control group income is $20,000.

Underinvestment in Public Health

3%

Of real national health care expenditures since 1980s

"*Prevention* requires tools that are often unfamiliar because educational, behavioral, and social interventions, not usually considered to be part of medicine, may be most effective for many diseases." – Moses et. al. (JAMA, 2013)
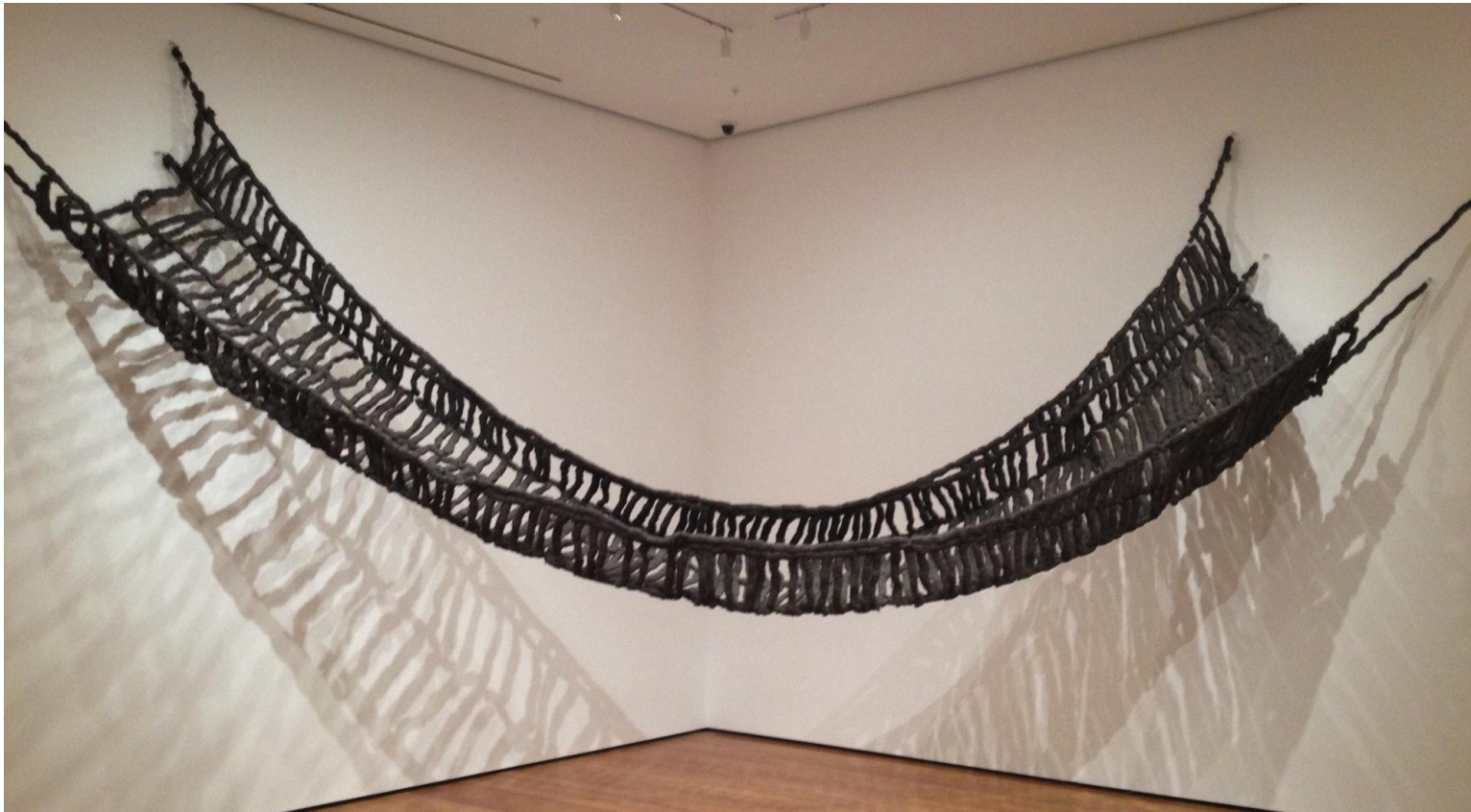
Moses et al. The anatomy of health care in the United States. JAMA. 2013

American Heart Association | American Stroke Association®

Public Health Spending Linked to Declines in Preventable Deaths

Mortality rate	% decrease per 10% spending increase
Infant deaths per 1000 live births	6.85
Heart disease deaths per 100,000	3.22
Diabetes deaths per 100,000	1.44
Cancer deaths per 100,000	1.13
Influenza deaths per 100,000	0.25

Mays and Smith, Health Affairs. Aug 2011;30(8).

American Heart Association | American Stroke Association®

Bridging Community and Clinical Care

Public Health and Medical Care

Primary Care and Public Health: Exploring Integration to Improve Population Health

- Recommendations whose implementation would assist the CDC, HRSA, and HHS in creating an environment that would foster broader integration of primary care and public health.

- HHS should work with its agencies to develop a national strategy and investment plan for creating a primary care and public health infrastructure robust enough and appropriately integrated to enable the agencies to play their appropriate roles in furthering the nation's population health goals.

Annual Report, IOM, March 28, 2012

American **Heart** Association | American **Stroke** Association®

The Practical Playbook

Public Health. Primary Care. Together.

- Enhancing the capacity to improve health and health outcomes by joining forces and resources

- Stages of integrated population health improvement

- Success stories (by size of community)

- But is this science?

Practical Playbook website, 2014

US Smoking Trends—High School Seniors and Adults (1965–2004)
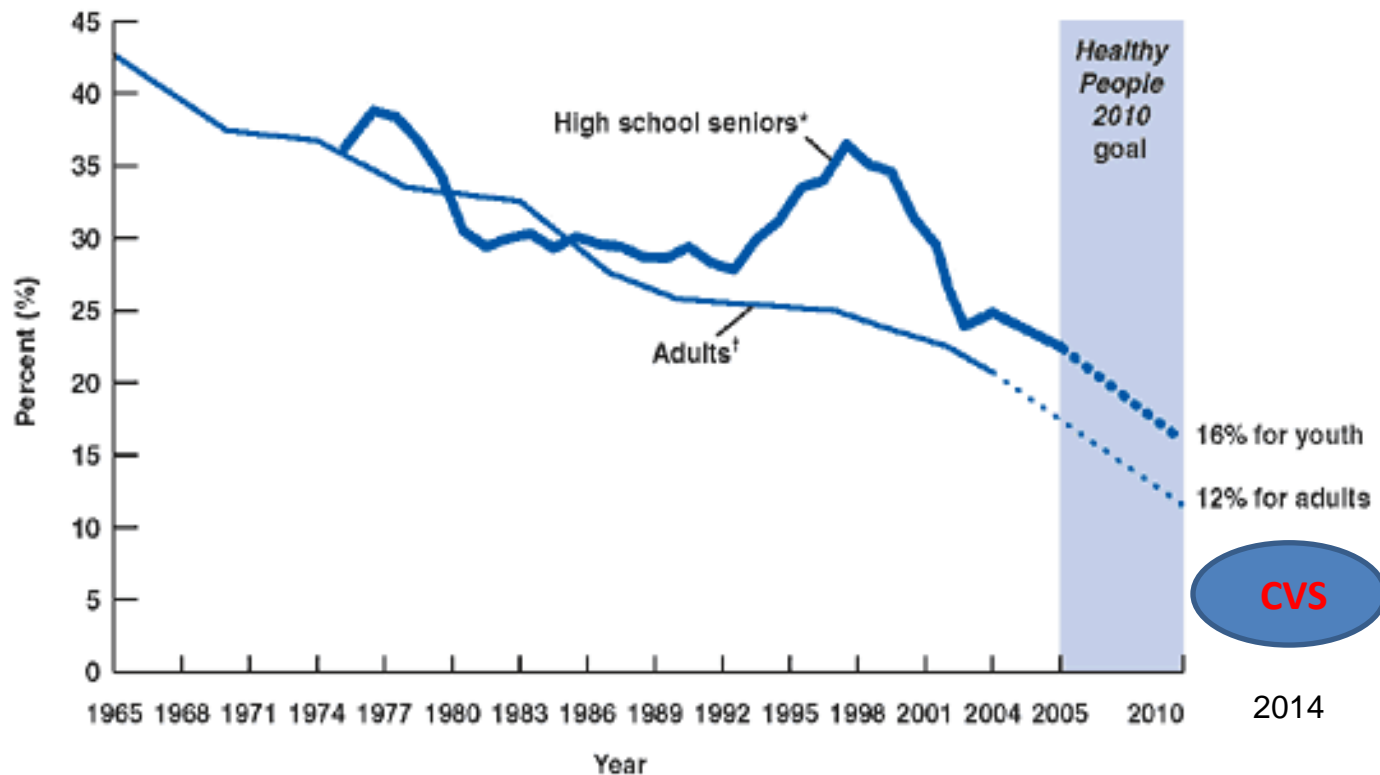
DSHS

Improving cardiovascualar health takes a multifactorial approach

Requires the engagement of …

- – Patients

- – Families

- – Providers

- – Healthcare delivery system

- – Communities

American Heart Association | American Stroke Association.

life is why™

AHA Strategic Approach: A blood pressure example

American Heart Association | American Stroke Association.
Check. Change. *Control.*™

Equipping Providers	Motivating & Connecting Consumers	Activating Communities	Enhancing Systems of Care
Help providers "do the right thing" within current HC system	Create innovative solutions to empower consumers, strengthen connections to HCPs and create urgency for change	Provide communities with ownable, sustainable, scalable and customizable programs	Create accountability at all levels of care
• Protocol Standardization • Incentives • Increasing role of other Rph and others	• Ubiquitous BP devices • Worksite programs • Technology to connect consumers w/HCPs • Incentives	• Health ambassadors • Pharmacy infrastructure • Apps to integrate consumers w/HCPs • Community health worker curriculum	• Create accountability at all levels of care • Performance measures • Surveillance system

July 2014

- 4 institutions received $15 million

  - Icahn School of Medicine at Mount Sinai will work to create an urban-based health program centered on combating obesity to reduce the incidence of heart disease and stroke.

  - Northwestern University will apply a behavioral approach to reverse the decline in heart health measures from childhood into middle age.

  - The University of Texas-Southwestern Medical School in Dallas will tackle how to prevent heart failure through interventions a clinical provider may be able to provide in the office setting.

  - Vanderbilt University will be tackling high blood pressure prevention through salt reduction.

American Heart Association | American Stroke Association®

life is why™

- **March 2014 – Topics announced:**

  - **Network #2: Hypertension**

  - **Network #3: Disparities in Cardiovascular Disease**

- **Oct/Nov 2014: Applications for *Hypertension* due**

- **April 2015 - Awardees for *Hypertension* Announced**

- **Jan/Feb 2015: Applications for *Disparities* due**

- **June 2015: Awardees for *Disparities* announced**

American **Heart** Association | American **Stroke** Association®

life is why™

Million Hearts® Maryland

- Simple 7 - based

- Individual and community-focused

- Comprehensive focus on health factors

- Public health and medical care

- Community and clinical linkage

- Science-based
  - Strategic research – basic/clinical/population science
  - Implementation science

American Heart Association | **American Stroke Association**

Thank you!